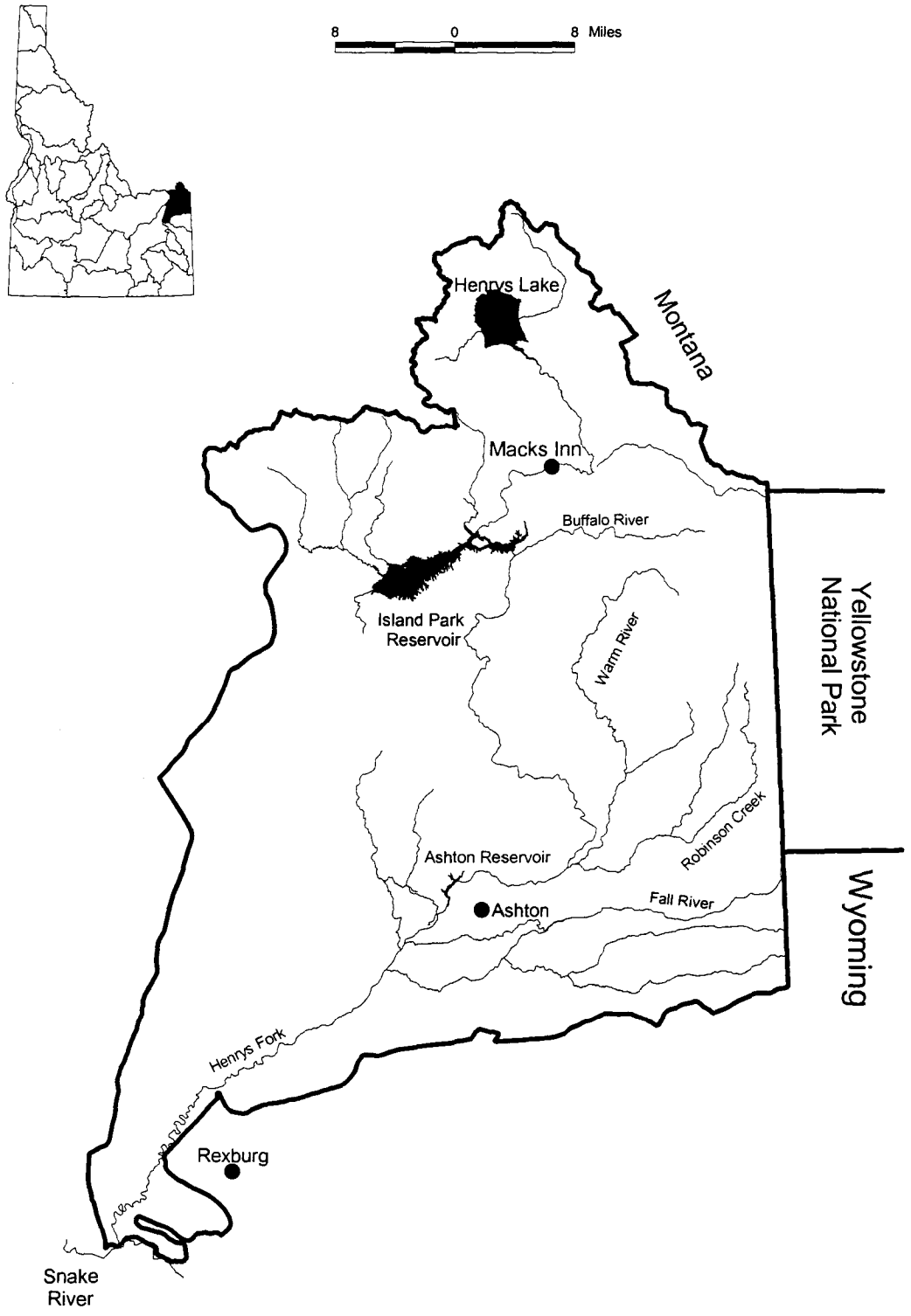
Henrys Fork Snake River Drainage



29. HENRYS FORK SNAKE RIVER DRAINAGE

A. Overview

In terms of habitat, the Henrys Fork drainage provides one of the most important rainbow trout fisheries in the state in fish populations and angler use. Important tributaries include the Teton, Fall, Warm, and Buffalo rivers. Henrys Lake and Island Park Reservoir are important components of the Henrys Fork fishery. The Teton River is discussed as a separate drainage.

The Henrys Fork Snake River below St. Anthony suffers from impacts of irrigation withdrawals and low flows, which limit salmonid populations. The habitat below the confluence of the Teton River is severely degraded as a result of the Teton Dam failure and flood in 1976.

Electrofishing surveys have documented a population of large cutthroat trout, which apparently recruit from the Teton River. The Upper Snake Region restricted cutthroat trout harvest regulation has increased survival and recruitment of wild cutthroat trout from the Teton River into this river reach. With supplemental stocking of cutthroat trout fingerlings, the lower Henrys Fork could provide catch rates of 0.3 fish/hour, or more.

The Henrys Fork above St. Anthony to Big Springs attracts anglers from throughout the nation. A major part of the fishing pressure is from tourists traveling to Yellowstone National Park. Annual angler use along this segment was 175,000 hours of effort, with catch rates of 1.25 fish/hour in 1976. Wild rainbow trout comprised 53% of the catch, hatchery rainbow trout 19%, brook trout 16%, and native cutthroat trout 1%. Hybrids (rainbow trout-cutthroat trout) and whitefish made up the remaining 12%, although whitefish are the most numerous game fish present.

Management of the Henrys Fork from St. Anthony to Island Park Dam will emphasize wild, natural populations without hatchery supplementation. This section of river is currently producing good numbers of wild rainbow trout and some brown and cutthroat trout. Whitefish are very abundant. Monitoring will continue, especially below Ashton Reservoir to ensure maintenance of current catch rates of 1.0 fish/hour or better. The Henrys Fork from Riverside Campground to Island Park Reservoir supports a world famous wild rainbow trout fishery. Catch rates and trout population sizes declined steadily through the 1980s and early 1990s due to changes in Island Park Reservoir water management. Both rebounded significantly in 1993 after the 1992 draining and chemical renovation of Island Park Reservoir. Angler satisfaction has remained high since 1993. Research conducted by Montana State University and the Department from 1995 to 1999 verified the importance of winter river flows in the Box Canyon reach. Higher flows from January through March in this reach result in significantly higher overwinter survival of juvenile trout and subsequent recruitment to the fishery below Island Park Reservoir. This reach will remain a trophy fishery, managed under catch-and-release regulations. Ashton Reservoir will be managed for a yield fishery under general regulations.

Island Park Reservoir is a widely fluctuating irrigation reservoir with a mean surface area of 8,400 acres. It provides an important reservoir fishery for rainbow trout and kokanee, with catch rates of up to 0.6 fish/hour. Supplemental stocking of cutthroat trout fingerlings in Island Park Reservoir will remain an option pending further evaluation of public attitudes about their use in the reservoir. Fall spawned rainbow trout fingerlings will be utilized for fall release in the east end of the reservoir to minimize avian predation of recently stocked fingerlings. Kokanee stocking will be maintained or increased in the future to provide both an open water fishery and a spawning fishery, and a viewing opportunity in the Upper Henrys Fork. Establishment of a late kokanee run (Pend Oreille Lake stock) in addition to the present early fall run will be considered. Lahontan cutthroat trout were stocked from 1993 to 1997 and splake were stocked from 1995 through 1998 to develop a quality trout fishery supported by an abundant forage base of Utah chubs and suckers. Subsequent monitoring has indicated that both species performed as well as, but no better than rainbow trout and kokanee. Lahontan cutthroat trout and splake stockings have been discontinued.

From Island Park Reservoir upstream to Henrys Lake, the Henrys Fork provides a yield fishery supported by natural production and supplemented by hatchery catchable rainbow trout.

Henrys Lake outlet is a low gradient stream section, which flows through an intensively used, privately owned cattle grazing area. Angler effort is concentrated below Henrys Lake Dam downstream to Highway 20. Trout emigration from Henrys Lake supports the majority of angler harvest. Cutthroat trout spawning in the three miles below Henrys Lake Dam is very obvious, with extensive angler pressure during the early weeks of the season. Low winter stream flows result in dewatering in the upper section of Henrys Lake Outlet. Opportunities to negotiate minimum stream flows and fence protective riparian zones will be pursued.

Henrys Lake is a shallow, highly productive lake covering 6,500 acres in the headwaters of the Henrys Fork. It has a long history of supporting an extensive sport fishery for large, native cutthroat trout. Since 1924, hatchery operations at the lake have taken cutthroat trout eggs for use in maintaining cutthroat trout fisheries in many areas of the state, including Henrys Lake.

Henrys Lake has been managed as a trophy trout water since 1976. Catch rate goals are 0.7 fish/hour with management goals having a catch rate of about 0.45 fish/hour for cutthroat trout, 0.15 fish/hour for hybrid and 0.10 fish/hour for brook trout. Size goals are 20% of hybrids over 20 inches, 10% cutthroat trout over 20 inches and 5% of brook trout over 17 inches. Henrys Lake produces large brook trout including the state record of 7.2 lbs. Cutthroat trout provide the majority of the catch, and good populations of pure strain cutthroat trout are necessary so that adequate eggs are available to produce rainbow trout x cutthroat trout hybrids. Declines in cutthroat trout stocks due to low water flows in the tributaries from 1977 to 1981 caused drastic declines in the spawning runs, which restricted the hybrid program at that time. A two-fish limit was instituted in 1980 to protect reduced populations of cutthroat trout. Since 1981, cooperative agreements between the Department, the Henrys Lake Foundation, and area ranchers have improved riparian and instream spawning and rearing habitat through protective fencing of spawning tributaries of Henrys Lake. Fish losses to irrigation ditches have also been reduced by cooperative diversion screening projects. These activities will continue on Duck Creek, Howard Creek, Targhee Creek and Kelly Springs. Evaluations of enhanced trout recruitment from these spawning tributaries to Henrys Lake have been ongoing since 1997 and will continue over the next five years.

From 1981 through 1984, emphasis on hatchery cutthroat trout enhancement provided cutthroat trout releases of 2,000,000 or more fry annually. By 1984, cutthroat trout populations had dramatically increased with a total catch rate of 1.7 fish/hour and 163,000 hours of effort. Increased densities of cutthroat trout depressed growth rates, thereby threatening the trophy management goals of Henrys Lake. During 1981 to 1984, hybrid and brook trout enhancement goals were not consistently met, resulting in declining catch rates of hybrids and brook trout. Beginning in 1985, cutthroat trout stocking was reduced to 1,000,000 per year with increased stocking of hybrid and brook trout production. Emphasis was targeted on producing a consistent number of larger hybrid fingerlings with further experimentation on sterilized hybrid crosses.

Stockings of cutthroat trout-rainbow trout hybrids were increased to approximately 250,000 per year. Hybrids in 1987 provided 34% of the catch, exceeding the management target of 20% of the Henrys Lake catch. The Henrys Lake hybrid program is now supported entirely by the production of sterile hybrid trout to protect the genetic integrity of the cutthroat trout population. Sterile hybrids (200,000) will be stocked in 2001. Recent genetic surveys of the Henrys Lake cutthroat trout population have documented a modest level of rainbow trout introgression (14%), low level of back-crossing (10%) and an essentially genetically pure stock of cutthroat trout in the lake. Future hatchery management will emphasize refinement of sterile hybrid production and enhancement of the genetic integrity of the Henrys Lake cutthroat trout population.

Utah chubs were discovered in Henrys Lake in 1993 during annual gill net surveys. Utah chubs are a serious nuisance species in regulated reservoir impoundments and pose a potential threat to the Henrys Lake fishery. Annual surveys since the 1993 discovery of Utah chubs are indicating an increasing trend in chub numbers. The consequences of an increasing Utah chub population in Henrys Lake cannot be accurately predicted at this time. Intensive surveys of Utah chubs in Henrys Lake will continue for the next five years. The Department will work to facilitate cooperative research with area universities to learn more about the Henrys Lake Utah chub population and its potential impacts to the Henrys Lake fishery.

Warm River is a major tributary to Henrys Fork, providing catch rates of 1.0 trout per hour or better. Warm River base flow is provided by large springs six miles upstream from its confluence with the Henrys Fork. It has large sections of good spawning gravel and fairly constant temperatures, which make it ideal for trout spawning. Rainbow trout and brown trout migrate from the Henrys Fork to spawn in Warm River during spring and fall, respectively. Due to the lack of spawning habitat in Henrys Fork between Ashton Dam and Mesa Falls, Warm River is critical to the maintenance of wild rainbow trout and brown trout populations for this section of the Henrys Fork. Warm River from the mouth upstream to the railroad tunnel is closed annually on September 30 for protection of spawning brown trout.

The Fall River is the largest Henrys Fork tributary. The Fall River is managed under the wild trout regulation (two trout possession limit) and supports an excellent wild rainbow trout fishery with catch rates of 1.0 fish/hour or better. Cutthroat trout and cutthroat trout-rainbow trout hybrids make up an incidental portion of the catch, but could contribute more under the Upper Snake Region cutthroat trout enhancement regulation and habitat enhancement efforts in the Conant and Squirrel Creek drainages. There is little recent information on the Fall River fishery. The lower four miles of the river is seasonally degraded by irrigation water withdrawals. The remainder of the drainage is in good condition.

B. Objectives and Programs

1. Objective: Maintain quality trout fishing in the Henrys Fork from the South Fork confluence upstream to Riverside Campground.

   Program: Monitor trout populations in indicator reaches by electrofishing on a regularly scheduled basis, propose regulation changes as biologically or socially necessary.

   Program: Maintain from the mouth to Del Rio its general harvest regulations for all trout with seasons and area closures as needed for protection of spawners.

   Program: Work for habitat and stream flow protection and/or enhancement.

2. Objective: Sustain high catch rates and a desirable size structure in the Henrys Fork on the catch-and-release section from Riverside Campground upstream to Island Park Dam.

   Program: Continue long-term monitoring of trout population and angling success through regularly scheduled sampling surveys.

   Program: Work for stream flow protection and enhancement, focusing on winter flow enhancements to optimize juvenile trout over-winter survival.

3. Objective: Manage the Henrys Fork above Island Park Reservoir for satisfactory and diverse angling opportunity, as desired by the public.

   Program: Continue long-term monitoring of trout population and angling success through regularly scheduled sampling surveys, propose regulation changes as biologically or socially necessary.

   Program: Work for habitat and stream flow protection and enhancement.

   Program: Continue to manage Island Park Reservoir for optimum trout production goals to ensure strong escapements of spawning rainbow trout and kokanee upstream through the upper Henrys Fork to Moose Creek, Big Springs, and Henrys Lake Outlet.

4. Objective: Maintain maximum fishing opportunity necessary without detriment to ecologically sensitive species (trumpeter swans) throughout the Henrys Fork drainage.

   Program: Monitor, through and in coordination with the Department wildlife bureau and the USFWS and its contractors, the spring nest distribution of trumpeter swans and potential impacts to swans by anglers, implementing emergency regulations (area closures, etc.) as needed.

5. Objective: Produce and maintain a quality, consumptive salmonid fishery in Island Park Reservoir.

   Program: Continue stocking hatchery rainbow trout and kokanee at a size and on a schedule that provides high quality fishing with economic efficiency.

   Program: Work towards reservoir tributary habitat and stream flow protection and enhancement.

1. Objective: Understand the status of Henrys Lake Utah chub population.

   Program: Continue annual spring gillnetting surveys with emphasis on trend chub data.

2. Objective: Evaluate management strategies to minimize negative impacts of Utah chubs to the trout fishery.

   Program: Develop cooperative research projects with area universities to better understand chub population dynamics in Henrys Lake and develop potential management strategies.

3. Objective: Conserve and enhance the genetic integrity of the Henrys Lake cutthroat trout population.

   Program: Continue to refine and implement the Henrys Lake sterile hybrid program.

   Program: Continue regular genetic monitoring of the Henrys Lake cutthroat trout population.

DRAINAGE: Henrys Fork Snake River

Water	Miles/acres	Fishery			Management Direction
		Type	Species present	Management	
Mouth to St. Anthony	30/	Coldwater	Rainbow trout Brown trout Whitefish Cutthroat trout	General Quality	Upper Snake cutthroat trout restricted harvest rule Manage for cutthroat trout below Teton River.
St. Anthony to Fritz Bridge	10/	Coldwater	Rainbow trout Brown trout Whitefish	Quality General	Manage as a fishery supported by natural production Maintain catch rate of 1.0 fish/hr.
Fritz Bridge to Ashton Dam	3/	Coldwater	Rainbow trout Brown trout Whitefish	Quality General	Spawning season closure for rainbow trout. No motors.
Ashton Dam to U.S. 20 Bridge	4/400	Coldwater	Rainbow trout Brown trout Kokanee Whitefish	General	Stock catchable rainbow trout to maintain catch rates o 1.0 fish/hr. Kokanee are downstream drift from Islanc Park Reservoir.
U.S. 20 Bridge to Lower Mesa Falls	25/	Coldwater	Rainbow trout Brown trout Whitefish	Quality General	Maintain wild population of rainbow trout to provide 12 inch average size and overall catch rate of 1.0 fish/hr.
Lower Mesa Falls to Riverside Campground	12/	Coldwater	Rainbow trout Whitefish	Quality General	Maintain 1.0 fish/hr catch rate for trout.
Riverside Campground to Island Park Dam, except Harriman State Park	9/	Coldwater	Rainbow trout Whitefish	Trophy General	Catch-and-release to maintain catch rate above 1.0 fish/hr for wild rainbow trout, with 5% of population ove 18 inches.
Harriman State Park	8/	Coldwater	Rainbow trout Whitefish	Trophy General	Fly fishing only as access stipulation. Short season fo waterfowl protection. Catch-and-release to produce trophy fish and protect spawning population. Maintair catch rate above 1.0 fish/hr.
Island Park Reservoir (up to McCrea Bridge)	/8,400	Coldwater	Rainbow trout Cutthroat trout Brook trout Kokanee Whitefish	General	Put-and-grow fishery for rainbow trout and kokanee Supplemental catchable rainbow trout stockings Maintain catch rate of 0.6 fish/hr.

Tributaries to Island Park Reservoir	45/	Coldwater	Rainbow trout Brook trout Cutthroat trout	General Quality	Maintain present fisheries with catch rate of 0.7 fish/hr Habitat improvement needed in tributaries. Upper Snake cutthroat trout restricted harvest rule.
McCrea Bridge to Henrys Lake Outlet	9/	Coldwater	Rainbow trout Rbt x ctt hybrids Brook trout Whitefish Cutthroat trout	General Quality	Upper Snake cutthroat trout restricted harvest. Put-and-take fishery on catchable rainbow trout. Maintain catch rates of 0.7 fish/hr.
Henrys Lake Outlet to Big Springs	2/	Coldwater	Rainbow trout Cutthroat trout Brook trout Whitefish	Conservation	Total angling closure for spawning, rearing, and fish observation.
Henrys Lake Outlet	12/	Coldwater	Cutthroat trout Rbt x ctt hybrids Rainbow trout Brook trout Whitefish	Quality General	Spawning area closure below dam to protect spawners and redds. Maintain wild trout populations to provide catch rates of 1.0 fish/hr. Habitat improvement needed.
Henrys Lake	/6,500	Coldwater	Cutthroat trout Rbt x ctt hybrids Brook trout	Wild trout and Trophy	Hatchery supplementation of cutthroat trout and hybrid trout only. Manage to produce catch rates of 0.7 fish/hr with 0.45 cutthroat trout/hr, 0.15 hybrid trout/hr, and 0.10 brook trout/hr. Manage with sterile hybrids and develop cutthroat trout stock.
Henrys Lake Tributaries	13/	Coldwater	Cutthroat trout Brook trout	Wild trout	Upper Snake cutthroat trout restricted harvest. Manage for spawning and rearing of cutthroat trout. Seek remedies to dewatering, continue irrigation ditch screening, and riparian fencing program.
Warm River and tributaries except Robinson Creek	92/	Coldwater	Rainbow trout Brook trout Whitefish Brown trout Cutthroat trout	General Quality	Upper Snake cutthroat trout restricted harvest. Maintain wild trout population. Supplemental put-and-take fishery in heavily fished areas of Warm River. Maintain catch rates of 1.0 fish/hr. Increase utilization of brook trout in tributaries.
Warm River from mouth of Robinson Creek to Highway 47 Bridge	0.2/	Coldwater	Rainbow trout Brown trout Brook trout Whitefish	Conservation	Spawning, rearing, and fish observation area.
Robinson Creek and tributaries	91/	Coldwater	Rainbow trout Brook trout Whitefish Brown trout Cutthroat trout	General Quality	Upper Snake cutthroat trout restricted harvest. Maintain wild trout population. Encourage increased utilization of brook trout.

Buffalo River and tributaries	50/	Coldwater	Rainbow trout Brook trout	General	Maintain populations and continue hatchery rainbow trou catchable supplementation to produce catch rates of 1.0 fish/hr.
Moose Creek and tributaries	6/	Coldwater	Rainbow trout Brook trout Kokanee	General Conservation	Season restriction to protect kokanee spawning run from Island park Reservoir.
Sand Creek WMA	/167	Coldwater	Rainbow trout Cutthroat trout Brook trout	General	Put-and-take fishery for rainbow trout; Put-and-grow fishery for rainbow trout and cutthroat trout. Maintain catch rate o 0.6 fish/hr
Silver Lake	/220	Coldwater	Cutthroat trout	Conservation	Administrative closure by Harriman State Park to protec waterfowl and natural features..
Golden Lake	/220	Coldwater	Rainbow trout Brook trout Cutthroat trout	Conservation	Golden Lake and Thurmon Creek drainage upstream managed for native cutthroat trout population
Other lakes and ponds	/345	Coldwater	Rainbow trout Cutthroat trout Brook trout Grayling	General	Maintain present fisheries with catch rate of 0.8 fish/hr Supplemental stocking of rainbow trout, cutthroat trou fingerlings.